Centre No.						Раре	er Refer	ence			Surname		Initial(s)
Candidate No.								/	5	В	Signature		
	-	r Reference	/5B	4	566	8/5	В					Exami	ner's use only

## **Edexcel GCSE**

Science: Double Award B (1536)

**Biology B (1529)** 

(Modules 7 and 8)

Paper 5B

# **Higher Tier**

Wednesday 13 June 2007 – Morning

Time: 30 minutes

Materials required for examination	Items included with question paper
Nil	Nil

#### **Instructions to Candidates**

In the boxes above, write your centre number, candidate number, your surname, initial(s) and signature, and complete the paper reference.

Check that you have the correct question paper.

Answer ALL the questions. Write your answers in the spaces provided in this question paper. Show all stages in any calculations and state the units. Calculators may be used. Include diagrams in your answers where these are helpful.

#### **Information for Candidates**

The marks for individual questions and the parts of questions are shown in round brackets: e.g. (2). There are 6 questions in this question paper. The total mark for this paper is 30. There are 12 pages in this question paper. Any blank pages are indicated.

#### **Advice to Candidates**



This symbol shows where the quality of your written answer will also be assessed.

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Turn over



Team Leader's use only

Question Number

1

2

3

4

5

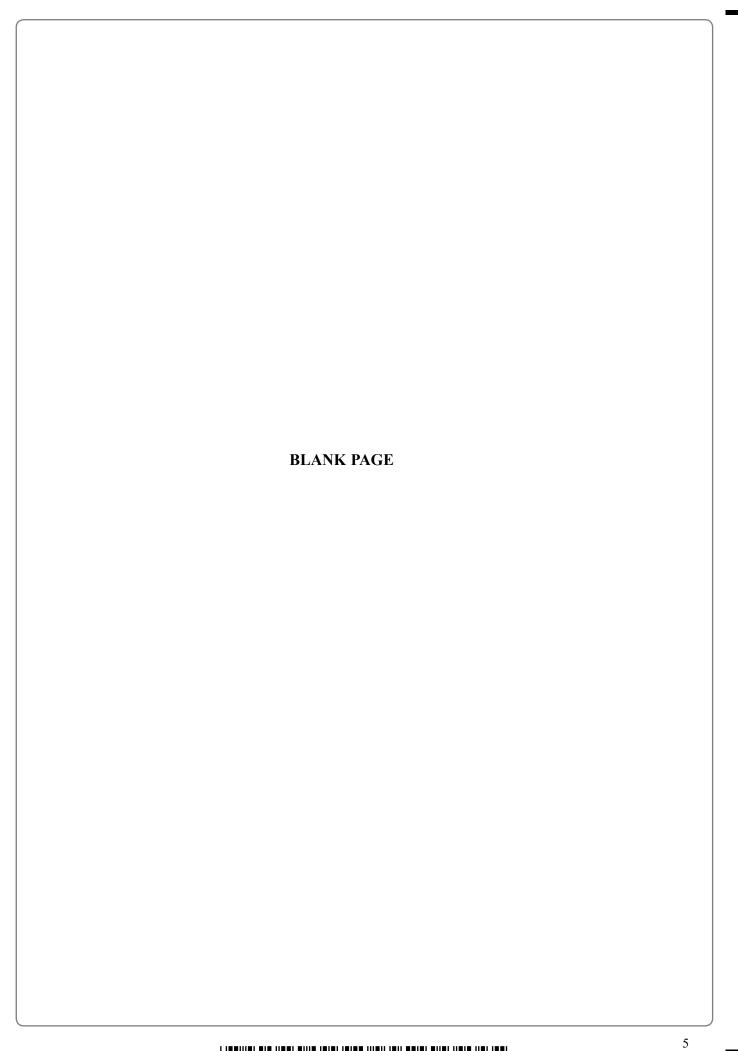
6

Total

Lesley is recovering from a heart attack.  The heart attack was caused when a blood clot blocked an artery in her heart.  Her doctor told her that the condition of her arteries had increased her chances of a heattack.							
a)		scribe one way that 'the condition of her arteries' may have made the clot more ely to block her artery.					
		(1)					
(b)		e doctor advised her to change her lifestyle by improving her diet and going for a k each day.					
	(i)	Suggest one way that she may improve her diet and explain how this may help to reduce the chance of having another heart attack.					
		(2)					
	(ii)	How might taking a walk each day help to reduce the chance of having another heart attack?					
	(ii)	How might taking a walk each day help to reduce the chance of having another					
	(ii)	How might taking a walk each day help to reduce the chance of having another					

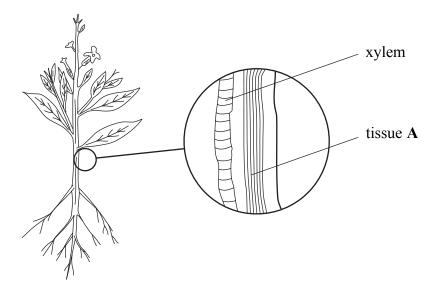
2.	(a)	(i)	Complete the word equation for photosynthesis.	Leave blank
	<b>、</b> /	( )	carbon dioxide + + glucose	
			(1)	
		(ii)	State one reason why the amount of carbon dioxide in the atmosphere is not decreasing even though it is being used up during photosynthesis.	
			(1)	
	(b)		me of the glucose made in photosynthesis is used up during respiration in leaves. scribe what happens to the rest of the glucose.	
		••••		
			(3)	Q2
			(Total 5 marks)	

		Leave blank
3.	Alex has just finished a race. She is breathing heavily and has cramp. Explain why Alex is still breathing heavily even though she has stopped running.	
	Explain why Alex is still breathing heavily even though she has stopped running.	
	)	
6		
		<b>Q3</b>
	(Total 4 marks)	





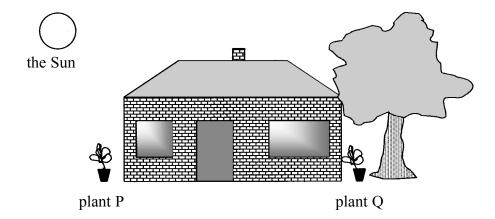
**4.** The diagram shows the tissues that transport substances in plants.



- (a) Name tissue A. (1)
- (b) Name one substance, other than water, which may be transported by tissue **A**.

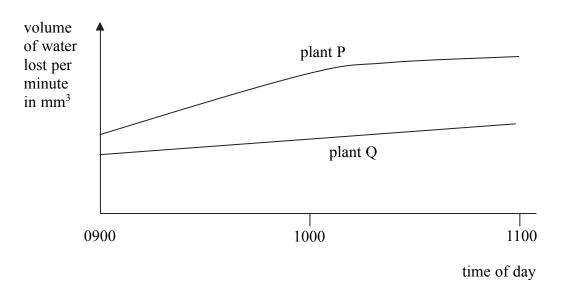
  (1)
- (c) State one feature of xylem that helps transport water from the roots to the leaves.

  (1)
- (d) Two identical plants, P and Q, were put either side of a house as shown in the diagram.



The volume of water lost from each plant by transpiration was measured over a two hour period from 0900.

The results are shown in this graph.



(i)	Explain why plant P lost more water and at a faster rate between 0900 and 10	15
	than plant Q.	

(ii) Suggest why the rate of transpiration in plant P decreases towards the end of the two hour period.

Q4

**(2)** 

(Total 7 marks)

**5.** Slugs are pests in gardens because they eat leaves.

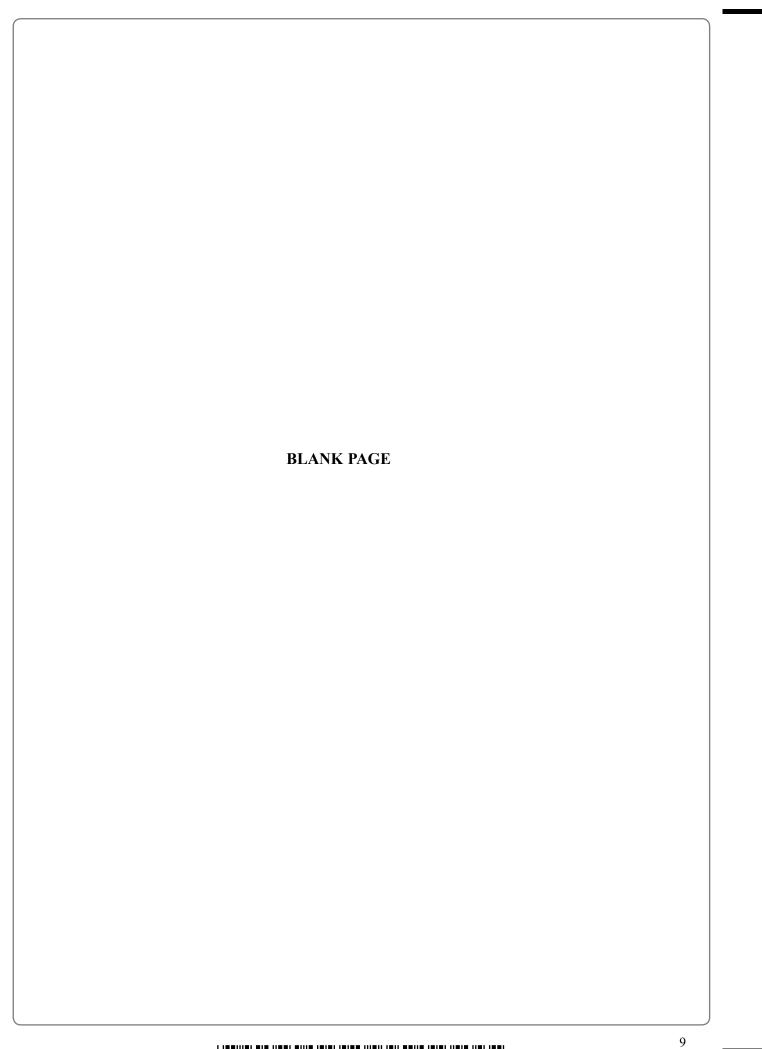
Kay has been using slug pellets, a type of chemical control, to kill slugs in her garden. She decides to use Nemaslug instead.

The label comes from a jar of 'Nemaslug'.

### **NEMASLUG**

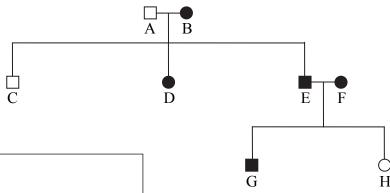
A form of biological control to control slugs using nematode worms

(a)	Explain what is meant by the term biological control.	
	(2)	
(b)	State one advantage and one disadvantage of using biological control instead of chemical control to kill pests.	
	Advantage	
	(1)	
	Disadvantage	
	(1)	Q5
	(Total 4 marks)	





**6.** The pedigree diagram below shows the inheritance of a genetic disorder which has serious consequences in later life. The disorder is caused by a dominant allele.



key

- female with disorder
- female without disorder
- male with disorder
- ☐ male without disorder

(a)	Explain why person D must be heterozygous. Use R to represent the dominant a and r to represent the recessive allele.	llele
		(2)
(b)	E and F are expecting a third child.	

(b) E and F are expecting a third child.
What is the probability that the child will inherit the disorder?

(1)

If the		Lea bla
(i)	Give one reason why some people think that having an abortion is justified.	
	(1)	
(ii)	Give one reason why some people think that having an abortion is not justified.	
	(1)	<b>Q6</b>
	If the not (i)	If the tests show that the baby will have the disorder they may consider whether or not to have an abortion.  (i) Give one reason why some people think that having an abortion is justified.  (1)  (ii) Give one reason why some people think that having an abortion is not justified.



